

DHCP issued by the core switch



AI Overview

A core switch can act as a DHCP server by configuring VLANs, SVIs, and DHCP pools, allowing connected clients on access switches to obtain IP addresses automatically.

Key Configuration Steps

- Enable DHCP Service** On Cisco switches, ensure the DHCP service is enabled using the command `service dhcp` in global configuration mode. This allows the switch to assign IP addresses to clients automatically.
- Create VLANs and SVIs** Each subnet should have a corresponding VLAN and a Switched Virtual Interface (SVI) on the core switch. Assign an IP address to each SVI, which will act as the default gateway for clients in that VLAN.
- Configure DHCP Pools** Define DHCP pools for each VLAN using the following steps:
 - Exclude IP addresses that should not be assigned (e.g., servers, routers)
 - Create a DHCP pool with a name
 - Specify the network and subnet mask
 - Set the default gateway (`default-router`)
 - Optionally, configure DNS servers and other options like Option 150 for IP phones
- Trunk Links to Access Switches** Ensure the links connecting the core switch to access switches are configured as trunks and carry the VLANs for which DHCP is provided. Use `switchport trunk encapsulation dot1q` if necessary.
- DHCP Relay (if needed)** If clients are on VLANs not directly configured on the core switch, enable DHCP relay (`ip helper-address`) on the SVI to forward DHCP requests to the core switch or another DHCP server.
- Security and Management Considerations**
 - DHCP Snooping:** Enable DHCP snooping to prevent rogue DHCP servers. Mark trusted interfaces (usually uplinks to the core switch) and untrusted interfaces (end-user ports) to filter DHCP messages.
 - Redundancy:** If multiple core switches exist, ensure STP handles redundant links properly. Only one path is active at a time, but backup links can take over if the primary fails.
 - Monitoring and Troubleshooting:** Use commands like `show ip dhcp binding` to view assigned addresses and `debug dhcp detail` to troubleshoot DHCP issues.
- Best Practices** Keep DHCP pools aligned with VLAN subnets. Avoid overlapping...

Article Content

Core Switch

Hi, I would like to start moving the DHCP role from our core switch to a Windows Domain Controller for one of our locations. I would like to test this by disabling one DHCP scope on the core

DHCP server on core switch good or bad? : r/networking

Personally, I am a fan of DHCP on the core switch, unless you need some functionality that the switch can't provide. The switch is typically going to be more reliable than a server running DHCP, and if the

Core Switch DHCP Server Management

Yes, it is, provided that the VLAN with the DHCP server is in the trunk that interconnects the switches. Please note that one of the links will be suspended by STP to avoid bridge loops, since

Troubleshoot DHCP in Enterprise Networks

This document describes how to troubleshoot several common issues with Dynamic Host Configuration Protocol (DHCP) in a Cisco Catalyst

Troubleshoot DHCP Client Connectivity Issue on a

This document describes various DHCP-related issues encountered by wireless clients when connected to a Cisco 9800 Wireless LAN Controller.

DHCP Conflicts on Core Switch

Hi Friend, I am facing issue with one of IP DHCP scope, IP's are conflicting. The scope is configured on Core Switch. Please find below-required information. Please help me to find the

DHCP network issue specific to core switch.

The problem I am facing now is that I can't get the new DHCP server to hand out IP address when plugged directly into the core HP 2910 switch. If I'm plugged into one of the other

Solved: DHCP Relay Issue

Hi everyone, I'm having issues with obtaining DHCP from a different subnet. Did some troubleshooting, but got to the point where I had to reach out for support. I'm trying to obtain a DHCP

DHCP Conflict on switch core

Hey. I am facing issue with releasing one reserved IP from dhcp pool. I got "Address 172.***.***.*** is not reserved. Use the clear binding command" message when i ...

DHCP network issue specific to core switch.

I currently have a HP Procurve 2910 core switch that is doing the routing in my network. As of right now, all our servers are plugged into this switch and we have uplinks to some layer 2 HP

Configuring DHCP on Routers and Switches

A Layer 2 switch cannot be a DHCP server, but it is still part of the DHCP path — it transparently forwards DHCP broadcast frames between clients and the relay or server.

Cisco CBS220 switch randomly rebooting

Hi everyone, I'm experiencing a frustrating issue with my Cisco CBS220-24P-4G switch. It works well overall, but it reboots randomly every 7 to 40 days. I have already updated the firmware to

Resolving Cisco Switch & Router "DHCP Server Pool

In previous articles, we showed how it is possible to configure a Cisco router or Catalyst switch to provide DHCP server services to network clients.

[crisstophergonza/cisco-multi-vlan-architecture](#)

Multi-VLAN Enterprise Campus Network with Dynamic DHCP Allocation  Architectural Overview This deployment engineers a scalable, secure, and production-ready Local Area Network (LAN)

Windows DHCP Server leasing issue : r/sysadmin

- debug dhcp service - double check the switch is not dropping the packets due to dhcp snooping config I've not found eventlog monitoring on windows dhcp service to be effective for troubleshooting.

DHCP Core Switch migration | Switching

client switch to dhcp and irb vlan on junos cores >dhcp In testing I rebooted a device on the VLAN and lost it, still has mac address on old cisco core switch I get a dhcp discover 0.0.0.0

Troubleshoot DHCP Issues on Catalyst 9000 DHCP

This document describes how to troubleshoot slow or intermittent DHCP address allocation failures on Catalyst 9000 switches as DHCP relay agents.

Re: User not getting IP via DHCP from Core Switch

DHCP is configured in core switch. But from yesterday many users (LAN and Wifi) are facing issue as they are getting disconnected from network due to not getting any ip via DHCP from

DHCP Core Switch migration | Switching

I get a dhcp discover 0.0.0.0 255.255.255.255 from a device on the migrated vlan after rebooting. All other devices that have not been rebooted are ok pingable etc.

Solved: Dhcp issue

We are currently experiencing an issue with our network setup that involves the DHCP server, Palo Alto firewall, core switch, and access switches. Our DHCP server is connected to the

How to Configure DHCP Server on Cisco Switches

This tutorial explains how to configure, test, and verify a DHCP server on a Cisco switch through a packet tracer example.

Core switch DHCP setup

With the core switch providing DHCP, if a closet TR switch reboots for some reason, all connected phones are going to reboot and request a DHCP address at pretty much the same time.

Dynamic Host Configuration Protocol

A network administrator reserves a range of IP addresses for DHCP, and each DHCP client on the LAN is configured to request an IP address from the DHCP server during network initialization.

setup dhcp on core switch and have access switch point

Hi, please check attached file. can I setup core switch for dhcp and have access switch point to core switch for dhcp....how do I do it? I never came

Solved: DHCP Configuration in Core Switches

Both locations have DHCP configured in their core switches and these two locations are connected with fiber. Access switches of the two locations are connected via fiber to their respective

Configuring DHCP Snooping

When you globally disable DHCP snooping, the switch stops validating DHCP messages and validating subsequent requests from untrusted hosts. It also removes the DHCP snooping binding database.

Contact Us

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